REMARKS

Information Disclosure Statement

The Examiner is requested to acknowledge that references BE-CG, filed with the Information Disclosure Statements of February 12, and March 1, 2004, have been considered. Also, herewith is submitted a supplemental Information Disclosure Statement, listing references CH-CI, and the Examiner is requested to indicate that these also have been considered.

Discussion of Claim Amendments

Claim 1 is amended to recite that the liposome comprises the indicated lipids. This amendment is supported in the specification, for example, on page 2.

Claim 2 is amended to specify that the liposome contains an antisense oligonucleotide. This amendment is supported in the original text of claim 2 and also in the specification, for example on page 2.

Claim 3 is amended to recite that the antisense olionucleotide is a raf antisense oligodeoxynucleotide. This amendment is supported in original claim 3 and also in the specification, for example on page 2.

Claim 4 is amended to recite that the antisense olionucleotide comprises a sequence of the indicated formula. This amendment more accurately refers to antecedent claims and is supported in the specification, for example, on page 2.

The dependencies of claims 7 and 8 are amended to cure antecedent references.

Claim 9 is amended to recite that the oligonucleodide is contained within a liposome comprising a non-toxic cationic lipid. This amendment is supported in the specification, for example, on page 2.

Claim 16 is amended to recite that the composition comprises oligonucleotides comprising the indicated sequence. This amendment more precisely states the claimed subject matter and is supported in claim 16 as previously presented and in the specification, for example, on page 2.

New claims 28-41 are supported by original claims 4-8 and in the specification, for example, on pages 2 and 4-5 and in the examples.

Claims 42-44 are supported in original claim 15 and in the specification, for example, on pages 2 and 4-5.

Claims 45-49 are supported on pages 2 and 4-5 of the specification.

No new matter is added by virtue of these claim amendments. Moreover, the amendments to these claims are presented for purposes of advancing prosecution and are without prejudice to applicants' right to continue prosecuting the subject matter of the claims prior to amendment. For the convenience of the Examiner, the text of the claims pending upon entry of the amendments is attached hereto.

Summary of the Office Action

The Office Action rejects claims 1-8 and 17 for non-statutory double-patenting over claims of U.S. Patent 6,126,965. The Office Action rejects claims 9, 10, 12-16, and 18-20 for non-statutory double-patenting over claims of U.S. Patent 6,334,314. The Office Action rejects claims 18-27 under 35 U.S.C. § 112, first paragraph for allegedly lacking enablement. The Office Action rejects claims 9, 10, and 11-15 under 35 U.S.C. § 112, first paragraph for allegedly lacking enablement. The Office Action also rejects claim 1 as anticipated by Epand et al. (U.S. Patent 5,283,185).

Discussion of Double Patenting Rejections

The Office Action rejects claims 1-8 and 17 for non-statutory double-patenting over claims of U.S. Patent 6,126,965. The Office Action rejects claims 9, 10, 12-16, and 18-20 for non-statutory double-patenting over claims of U.S. Patent 6,334,314. Applicants intend to file Terminal Disclaimers in accordance with 37 C.F.R. § 1.321 during the pendency of this patent application, which will obviate the basis for the non-statutory double-patenting rejection.

Discussion of Enablement Rejections

Claims 18-27

The Office Action rejects claims 18-27 under 35 U.S.C. § 112, first paragraph for allegedly lacking enablement. The basis for these rejections is that the application allegedly

only enables the practice of the claimed method insofar as the oligonucleotide comprises SEQ ID NO:1. Applicants traverse this rejection.

To satisfy the enablement requirement of 35 U.S.C. § 112, the specification must enable one of ordinary skill in the art to make and use the invention without undue experimentation. This requirement, however, does not impose on applicants to re-teach and re-disclose what is already known in the art; in fact, patents preferably omit such matter. *See, e.g., Hybritech v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed.Cir.1986). As noted in the Office Action, the specification discloses how to make and use formulations comprising liposomes that comprise a cationic lipid, phosphatidylcholine and cholesterol and also include an oligonucleotide that is antisense to an oncogene. The Office Action contends that the only oligonucleotides disclosed in the application comprise SEQ ID NO:1, and that, for this reason alone, the claims should be limited to such sequence. However, other oligonucleotides with sequences also antisense to oncogenes are known (see, e.g., U.S. Patents 5,563,255, 5,952,229, and 6,090,626 and international patent publications WO94/15645, W094/23755, and WO99/02167 (copies of which have been made of record)). Accordingly, since the art has already disclosed several oligonucleotide sequences, the selection and use of such sequences in the method as disclosed in claims 18-27 is not unpredictable. As such, claims 18-27 are enabled, and the rejection under 35 U.S.C. § 112 should be withdrawn.

Claims 9, 10, and 11-15

The Office Action rejects claims 9, 10, and 11-15 under 35 U.S.C. § 112, first paragraph, as allegedly lacking enablement. The Office Action suggests that the specification enables a method of radiosensitizing tumor tissue by administration of a radiosensitizing effective amount of at least one antisense oligonucleotide of no more than 40 bases containing the sequence 5' -GTGCTCCATTGATGC- 3' (SEQ ID NO: 1), wherein the oligonucleotide is contained within a liposome. While applicants traverse this rejection and believe that the claim as previously presented was fully enabled by the specification, to advance prosecution, claim 9 has been amended to recite that the oligonucleotide is contained within a liposome comprising a non-toxic cationic lipid. It is believed that the specification enables this claim.

Discussion of Anticipation Rejection

The Office Action rejects claim 1 under 35 U.S.C. § 102 as anticipated by Epand et al. (U.S. Patent 5,283,185). Epand discloses a method for facilitating the transfer of plasmids into cells that uses a mixed lipid dispersion of a cationic lipid with a co-lipid. The cationic lipid "has a structure which includes a lipophilic group derived from cholesterol, a linker bond, a spacer arm including from about 1 to about 20 carbon atoms in a branched or unbranched linear alkyl chain, and a cationic amino group." Accordingly, the cholesterol derivatives employed by Epand et al. are linked to a cation and thereby constitute ***part of*** the cationic lipid that is included with the co-lipid in the mixed lipid dispersions described therein. In contrast, pending claim 1 recites the use of a cationic lipid, phosphatidylcholine ***and*** cholesterol. Accordingly, Epand et al. does not disclose the elements of claim 1, and the rejection under 35 U.S.C. § 102 should be withdrawn.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

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